CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

CLEANUP AND ABATEMENT ORDER NO. 6-98-66
WDID NO. 6A099809N03

Requiring the Johnson Revocable Trust,
Matthew Johnson, Stephanie Johnson, and Edward Schulz, Jr.
to Clean Up and Abate the Effects of the Discharge
of Petroleum Products and Other Wastes to the Ground Waters of the
Lake Tahoe Hydrologic Unit at 2314 Lake Tahoe Boulevard, South Lake Tahoe, El Dorado County

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The California Regional Water Quality Control Board, Lahontan Region (Regional Board), finds:

1. The property at 2314 Lake Tahoe Boulevard, South Lake Tahoe, El Dorado County, is owned by the Johnson Revocable Trust. Stephanie Johnson is the trustee of the Trust. Matthew Johnson is the manager of the property.

2. The Johnson Revocable Trust property at 2314 Lake Tahoe Boulevard, South Lake Tahoe, was formerly leased to Edward Schulz, Jr. and until February 28, 1998 housed Ed's Auto Body.

3. On November 30, 1995 and February 22, 1996, samples collected from a 500 gallon underground tank inside the Ed's Auto Body building contained gasoline- and motor oil-range hydrocarbons and aromatic and volatile organic compounds consistent with paint thinner and paint stripper wastes. Fluid samples from the tank contained contaminants including gasoline- and motor oil-range petroleum hydrocarbons at 750 grams per liter (75%), toluene at 110,000 micrograms per liter (µg/L or ppb), acetone at 93,000 ppb, xylenes at 47,000 ppb, and 2-butanone (methyl ethyl ketone) at 22,000 ppb, in addition to other contaminants. The tank contents were removed and disposed under Hazardous Waste Manifest in February 1996.

4. On February 28, 1998, Edward Schulz' lease on the property terminated, and Ed's Auto Body vacated the facility at approximately that time.

5. On March 10 or March 11, 1998, a gasoline dispenser at the Beacon Gas Station at 2304 Lake Tahoe Boulevard was damaged by a motorist, and gasoline was discharged to ground and to groundwater at the station. As a precaution, the South Tahoe Public Utility District (STPUD) shut down their two Helen Avenue municipal drinking water supply wells that are located approximately 350 feet from the gas station. The Beacon station is owned and operated by Ultramar, Inc. and is located west across Truckee Avenue from the Johnson property.

6. On March 13, 1998, waste fluids were again discovered to be present in the underground tank inside the former Ed's Auto Body building, and the contents of the tank were again removed and disposed of under Hazardous Waste Manifest. The tank was cleaned by triple rinsing.

7. On March 26, 1998, after assurances were received that the Ultramar groundwater pump-and-treat remediation system was operating at the Beacon gas station, STPUD resumed pumping the Helen Avenue drinking water wells.

8. On April 6, 1998, STPUD was informed that effluent from the Ultramar groundwater pump-and-treat system exceeded the STPUD limitation of 35 ppb methyl tertiary-butyl ether (MTBE) for discharge to the sewer. Ultramar shut down the treatment system for repairs. STPUD ceased pumping from the Helen Avenue drinking water wells as a precaution. STPUD has not operated the Helen Avenue wells since. The Ultramar remediation system was restarted on April 11, 1998.

9. On April 15 and 22, 1998, groundwater samples collected from Ultramar's monitoring well MW-6, located on Barton Avenue just south of the Johnson property, contained MTBE at concentrations of 3,300 ppb and 2,400 ppb, respectively. Since its installation in 1989, MW-6 had not contained detectable concentrations of gasoline constituents; however, prior to April 15, 1998, MW-6 had been analyzed for MTBE only once, on November, 20, 1997. This monitoring well is approximately 300 feet away from STPUD's Helen Avenue municipal drinking water wells, making MW-6 the closest monitoring well to the municipal wells.

10. On May 14, 1998, a groundwater sample collected from a piezometer located approximately 50 feet north of the STPUD Helen Avenue wells contained MTBE at 0.86 ppb.

11. On May 14 and May 29, 1998, samples were collected from the underground tank at the Johnson property; the tank was again full of fluids. Samples contained contaminants in concentrations similar to those detected in November 1995. In addition, methylene chloride, a chlorinated solvent typically used as a paint stripper, was detected at 4,000 ppb and 6,800 ppb in the tank fluid. This level is below the laboratory reporting limits for chlorinated hydrocarbons in earlier samples. The May 14, 1998 sampling was conducted by HSI GeoTrans for STPUD. A split sample of the tank contents were collected by Delta Environmental Consultants for Ultramar. Sample results were similar with the exception of gasoline-range petroleum hydrocarbons (TPG-g) and MTBE. STPUD's sample indicated TPH-g at 240 parts per million (ppm), and MTBE was not detected at a reporting limit of 250 ppb. Ultramar's sample indicated TPH-g at 400 ppm and MTBE at 940 ppb.

12. On May 29, 1998, a groundwater sample collected by Matthew Johnson's consultant from a GeoProbe boring near the rear (south side) of the Johnson property contained MTBE at 6.7 ppb; no other gasoline constituents were detected.

13. On July 13, 1998, the Johnson's contractor emptied the tank for the third time, and disposed of its contents under Hazardous Waste Manifest. The tank was again triple rinsed, and the tank was filled with cement to abandon it in place.

14. On August 31, 1998, soil samples collected from shallow soil at the rear of the Johnson property contained low levels of petroleum hydrocarbons. A soil sample collected from a floor drain inside the former Ed's Auto Body building contained tetrachloroethene (PCE) at a concentration of 1,200,000 micrograms per kilogram (ppb).

15. On September 3, 1998, the Regional Board, pursuant to Section 13267 of the California Water Code, required the Dischargers to conduct a site investigation and to conduct remediation activities at the Johnson property, which formerly contained Ed's Auto Body. Soil and groundwater analyses at and near the Johnson property indicate the property is a likely source of petroleum product and other pollution to the ground water in the area. The groundwater data indicate a commingled contaminant plume is present in the area, with both the Ultramar site and the Johnson site as sources.

16. Because the boundaries of the petroleum product and other pollution have not been fully identified by activities conducted to date, and adequate plume containment has not been proposed or implemented, this Order contains tasks and compliance dates to require the Dischargers to take actions to clean up and abate soil and groundwater contamination on and beneath the Johnson property and the corresponding commingled contaminant plume surrounding the Johnson property.

17. This enforcement action is being taken to enforce the provisions of the California Water Code and as such is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000 et. seq.) in accordance with Section 15321, Chapter 3, Title 14, of the California Code of Regulation.

THEREFORE, IT IS HEREBY ORDERED that pursuant to California Water Code Section 13304, the Johnson Revocable Trust, Matthew Johnson, Stephanie Johnson, and Edward Schulz, Jr. (hereinafter referred to as the Dischargers) shall clean up and abate the discharge and threatened discharge of petroleum hydrocarbons and other wastes to waters of the State, and shall comply with the provisions of this order:

1. The Johnson Revocable Trust, Matthew Johnson, Stephanie Johnson, and Edward Schulz, Jr. shall conduct the investigation and cleanup tasks by or under the direction of a California registered geologist or civil engineer experienced in the area of groundwater pollution cleanup.

2. The Johnson Revocable Trust, Matthew Johnson, Stephanie Johnson, and Edward Schulz, Jr. shall not cause or permit any waste to be discharged or deposited where it is, or probably will be discharged into waters of the State.

Investigation

3. By **November 16, 1998**, submit to the Regional Board the results of the soil and groundwater investigation proposed in your September 25, 1998 workplan, as amended and as approved by Board staff on September 28, 1998, including analytical chemistry data, groundwater elevation data, and monitoring well construction details. The investigation shall define the vertical and areal extent of petroleum products, gasoline additives, chlorinated solvents, and all other wastes that exist in soil and ground water in the area of the Johnson property.

   Analyses. Analyses submitted pursuant to the investigation must include TPH-g; BTEX; volatile organic compounds including chlorinated hydrocarbons; and gasoline oxygenates including MTBE, tertiary-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), and tertiary amyl methyl ether (TAME). Analyses for volatile organic compounds and oxygenates shall be by EPA Method 8260 or its equivalent. Detection limits for BTEX, chlorinated hydrocarbons, and oxygenates shall be 0.5 ppb in aqueous samples and 5 ppb in soil samples. The detection limit for TBA shall be 50 ppb in aqueous samples and 250 ppb in soil samples. The detection limit for TPH-g shall not be greater than 50 ppb in aqueous samples and 500 ppb in soil samples.

   Quality assurance/quality control. QA/QC samples shall include 1) one trip blank per cooler and 2) one equipment blank per piece of sampling equipment (sample bailer, sample pump, etc.); if disposable bailers are used for sampling, one equipment blank shall be submitted from one representative bailer per sampling round. Laboratory QA/QC samples shall be analyzed for TPH-g, BTEX, and MTBE. Confirm positive identifications with GC/MS methods.

   Well survey. Groundwater monitoring wells shall be surveyed by a California licensed land surveyor. The survey shall be referenced to the North American Datum of 1927 (NAD27) and the National Geodetic Vertical Datum of 1929 (NGVD29). Groundwater elevations shall be reported in reference to these surveyed data.

   Results of the investigation shall include text interpretation of data collected and recommendations for further action that is necessary to achieve and demonstrate compliance with the requirements of the investigation and remedial action portions of

this order. This report shall also include a summary of work performed and data collected during the current interim remedial action activities (soil testing and excavation), data collected on aquifer hydraulic properties, and data collected in support of contaminant fate and transport modeling. Groundwater elevation data shall be collected from all wells at and around the site within a three hour period in order to produce comparable data.

Remedial Action

4. By **December 1, 1998**, submit to the Regional Board a Remedial Design for containment and treatment of the entire extent of groundwater contamination on and beneath the Johnson property and the corresponding commingled contaminant plume surrounding the Johnson property in accordance with the following Remedial Action Standards:

   The system(s) described by the design must hydraulically contain petroleum products, gasoline additives, chlorinated solvents, and all other wastes in the ground water, remove the contaminants, restore the beneficial use of the aquifer, and prevent migration of the plume toward the STPUD Helen wells when the Helen wells are in operation at their normal combined pumping rate of approximately 360 gallons per minute. The design and implementation of the system shall be such to restore the beneficial use of the aquifer in and around the STPUD Helen Avenue wells, enabling the normal operation of the wells no later than April 1, 1999.

   Remediation must continue until a level between background and the Maximum Contaminant Levels (MCLs), Secondary Maximum Contaminant Levels (SMCLs) and Action Levels (Als) is achieved in all groundwater monitoring wells for four consecutive quarters and the contaminants in ground water no longer create, or threaten to create, a condition of pollution or nuisance. Any proposed cleanup level greater than the background concentration shall be supported by an economic and technical feasibility analysis pursuant to State Water Resources Control Board Policy No. 92-49.

   In order to achieve and demonstrate compliance with this standard, a groundwater flow model shall be constructed and submitted along with the design of the pump-and-treat system. This model should be used for the basis of the design of the pump-and-treat system. It should be constructed from the available data from site investigations and nearby well construction, along with whatever additional data is necessary.

   The Dischargers must describe the necessary equipment, materials and methods, show designs, and describe permits required to implement the plan. The design plan must include a detailed construction and operation schedule, an operations and maintenance plan, a performance monitoring plan, and a process flow diagram. The

submittal must demonstrate that the Remedial Design will meet the objectives set forth above.

5. By **November 16, 1998**, submit to the Regional Board a plan for remediation of residual soil contamination at the Johnson property. This plan must address cleanup methodology and cleanup levels to prevent impairment of the underlying groundwater.

6. By **January 15, 1999**, following approval by Board staff, implement the remediation system detailed in the design produced by Order No. 4.

7. By **April 1, 1999**, operate the groundwater remediation system such that all contaminants including petroleum product, gasoline additives, chlorinated hydrocarbons, or all other wastes will not enter the STPUD Helen Avenue wells as a result of normal operation by STPUD.

8. The Regional Board shall be notified by facsimile by the Dischargers **within one working day** after the cleanup system(s) is observed to be inoperative.

9. By **June 1, 1999**, implement remediation of residual soil contamination.

Monitoring and Reporting

10. Beginning **November 16, 1998** and by the 16th of **every month thereafter**, collect groundwater elevations from all monitoring wells in the monitoring well network and sample the wells for chemical analyses. The analyses must include TPH-g; BTEX; volatile organic compounds including chlorinated hydrocarbons; and gasoline oxygenates including MTBE, TBA, DIPE, ETBE, and TAME. Analyses for volatile organic compounds and oxygenates shall be by EPA Method 8260 or its equivalent. Detection limits for BTEX, chlorinated hydrocarbons, and oxygenates shall be 0.5 ppb in aqueous samples. The detection limit for TBA shall be 50 ppb in aqueous samples. The detection limit for TPH-g shall not be greater than 50 ppb in aqueous samples.

11. By **November 30, 1998** and by the 30th of **every month thereafter**, submit (by facsimile) the monitoring well analytical results and groundwater elevations to the Regional Board (results of each monitoring round are to be transmitted to Regional Board staff within fourteen calendar days of sampling).

12. By **December 16, 1998** and by the 16th of **every third month thereafter**, submit monitoring reports. The report must contain progress on the cleanup status which demonstrates continued compliance with cleanup actions required by the Regional Board. The reports must include summaries of the on-going monthly groundwater monitoring data showing the concentrations of MTBE, other gasoline product oxygenates, chlorinated hydrocarbons, BTEX, and TPH-g, in ground water. All data

shall be cumulatively tabulated. The report must contain a list of and an explanation of each instance when the cleanup system(s) is inoperative for 12 hours or more.

13. By **February 3, 1999**, submit a technical report that defines the vertical and lateral extent of pollutants and assesses whether the remediation system(s) has hydraulically contained the petroleum products, gasoline additives, chlorinated hydrocarbons, and all other wastes; remove the contaminants; and prevent migration of the plume toward the Helen wells when the Helen Avenue wells are in operation. The technical report must include, at a minimum:

    i. Ground water elevations from wells surveyed by a California licensed land surveyor;

    ii. A potentiometric map with water table contours;

    iii. A revised groundwater modeling report describing the aquifer flow conditions with and without remediation system extraction wells operating and with and without the STPUD Helen wells pumping;

    iv. Groundwater pollution contours for MTBE, chlorinated hydrocarbons (if present), TPH-g, and gasoline constituents on maps;

    v. A description of the vertical thickness of petroleum and chlorinated hydrocarbon pollution in ground water at the source areas and towards the Helen Avenue municipal supply well;

    vi. A geologic cross section or sections showing stratigraphic layers, water table elevations, and extent of petroleum pollution and chlorinated hydrocarbon pollution, if present; and

    vii. An estimate of the cleanup time to reach complete remediation.

Due to the commingled nature of the contaminant plume beneath the Johnson property, the Ultramar property, and surrounding area, the Regional Board will accept unified work products that meet the requirements of both this Order and Ultramar's Cleanup and Abatement Order No. 6-89-050A1; separate work products from the two parties are also acceptable, as long as their combined scope satisfy the requirements of the Orders.

Failure to comply with the terms or conditions of this Cleanup and Abatement Order will result in additional enforcement action, which may include the imposition of administrative civil liability pursuant to Section 13350 of the California Water Code or referral to the Attorney General of the State of California for such legal action as he or she may deem appropriate.

Ordered by:_____ Dated: _____

HAROLD J. SINGER
EXECUTIVE OFFICER